



Faculty of Education

Journal of Education

**The Effect of Utilizing the Six Thinking Hats Strategy
on Developing the English Language Speaking Skill and
Attitudes towards it among Online EFL General
Diploma Students**

BY

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Receipt date: 2 March2021 - Date of acceptance: 25 March2021

DOI: 10.12816/EDUSOHAG. 2021.

Abstract

The current study aimed at investigating the effect of utilizing the Six Thinking Hats strategy on developing the English Language speaking skill and attitudes towards the skill among online EFL General Diploma students. The participants were one experimental group, thirty-two students. Three main instruments were used for data collection: speaking sub-skills checklist, speaking test and attitudes scale. The experimental group were taught using the Six Thinking Hats strategy for twelve weeks during the first semester of the academic year 2020/2021. Data collected through the pre and post administration of the instruments was subjected to t-test. The results, revealed through the post-administration of the speaking test and the attitudes scale, displayed that the post-performance of the experimental group significantly exceeded its own pre-performance. Thus, the results reflected support for the study hypotheses. They proved the positive effect of the Six Thinking Hats strategy on developing the English Language speaking skill and attitudes towards the skill among online EFL General Diploma students.

Keywords: the Six Thinking Hats strategy, the speaking skill, attitudes.

أثر استخدام إستراتيجية قبعات التفكير الست على تنمية مهارة التحدث باللغة الإنجليزية والإتجاهات نحو المهارة لدى طلاب الدبلوم العامة في التربية تخصص اللغة الإنجليزية شعبة التعليم الإلكتروني

ملخص

سُتهدفت الدراسة الحالية التعرف على أثر استخدام إستراتيجية قبعات التفكير الست في التدريس على تنمية مهارة التحدث باللغة الإنجليزية والإتجاهات نحو المهارة لدى طلاب الدبلوم العامة في التربية تخصص اللغة الإنجليزية شعبة التعليم الإلكتروني. وقد قامت الباحثة بتطبيق الإستراتيجية على مجموعة بحثية من إثنين وثلاثين طالباً وطالبة مقيدين بالدبلوم. وقد تم استخدام ثلاث أدوات لجمع البيانات هي: قائمة المهارات الفرعية للتحدث وإختبار التحدث ومقياس الإتجاهات نحو المهارة. وقد قامت الباحثة بتطبيق الإستراتيجية في إثني عشر أسبوعاً، وتم معالجة البيانات التي تم جمعها من خلال التطبيق القبلي والبعدي للإختبار والمقياس، وذلك باستخدام (إختبارات - ت). وقد أشارت النتائج إلى تحقيق مجموعة البحث مستوى أفضل في الأداء في التطبيق البعدي لكل من الإختبار والمقياس عن التطبيق القبلي لنفس المجموعة. وبذلك، فقد أكدت النتائج صحة فروض الدراسة، وكذلك الأثر الإيجابي للإستراتيجية على تنمية مهارة التحدث باللغة الإنجليزية وتنمية الإتجاهات نحو المهارة لدى طلاب الدبلوم العامة في التربية تخصص اللغة الإنجليزية شعبة التعليم الإلكتروني.

الكلمات المفتاحية: إستراتيجية قبعات التفكير الست - مهارة التحدث - الإتجاهات.

I. Introduction

Speaking is considered an essential skill in foreign language teaching and learning. It is indispensable for communication and interaction. However, students still have an unconscious worry to speak, thinking of possible mistakes. They are often unwilling to express their opinions, seeking only for the correct answer required by their teacher.

Speaking is one of English Language two productive skills; namely speaking and writing. “It involves communicative performance and other important elements such as, pronunciation, grammar, vocabulary, fluency and comprehension” (Larasanti & Dianti, 2019, P. 44). “Thus, it is important to create a comfortable situation in the classroom where students are not afraid to speak and enjoy sharing their ideas and thoughts” (Hani, Petrus & Sitinjak, 2017, p.85).

Since the emergence of the Communicative Language Approach, the importance of fluency as a goal for teaching spoken English increased. Gradually, research began to focus on the nature of authentic oral interaction, and recognized that new trends to teaching spoken English should be supported by the analysis of this interaction. Consequently, the goal of teaching spoken language turned into developing effective communication skills that are characterized by fluency and intelligibility at the same time (Richards, 2015, pp. 407-408). Effective speaking activities and teaching can be highly motivating. If the students are participating fully, and if the teacher sets up engaging activities and gives the students beneficial feedback, their speaking skill will significantly develop (Harmer, 2000, p.88).

That is why, the possibilities of making out-of-the-box teaching is sought (Jane, 2018, p.63). One of these possibilities is utilizing the Six Thinking Hats designed by De Bono in 1986. The Six Thinking Hats is a strategy that helps teachers originate situations in which students can practice language creatively (Al-Khataybeh & Al-Tarawneh, 2015, p.26). It changes the assumption that the teacher is the only ‘knower’ who transfers knowledge to students and that the student is a passive participant in the educational process into another assumption utilizing a more learner-centred promising teaching strategy (Litak, 2015, p.8).

De Bono used six metaphoric coloured hats to reflect six different modes of thinking (Phuntsho & Wangdi, 2020, p.28). The white hat represents the objective facts, the red hat is concerned with the emotional view. The black hat manifests the weaknesses in an idea. The yellow hat

reveals positive thinking. The green hat denotes new ideas. The blue hat points to the organization of the whole thinking process (Noviati, 2019, pp.70-71).

The main principle of the Six Thinking Hats strategy is to discuss a certain situation or problem, and come to a consensus on the best solution(s) for this problem (Pang & Burri, 2018, p.117). Thus, De Bono made use of the parallel thinking, rather than the argumentative confrontational thinking where each group deliberately takes an opposite view. In parallel thinking, every student at every moment is looking in the same direction. The thoughts are organized in parallel. Consequently, the topic is fully explored quickly (De Bono, 2017, pp.4-9). The process, thus, is more inclusive and all participants are given a voice (Pang & Burri, 2018, p.117).

Moreover, by using the Six Thinking Hats, teachers can prepare students to deal with real life situations. They can construct a non-threatening environment that encourages students with different learning styles to participate. Thus, teachers can help students acquire positive attitudes and be motivated to learn English (Khadzhiev & Rakhimov, 2019, p.330).

Mc Aleer (2006, p.114) specified the benefits of using the Six Thinking Hats strategy in class as follows:

1. The colours of the hats can provide a visual image that is easy to use.
2. Critical and creative thinking can be developed.
3. The strategy can be used on either a concrete or an abstract level.
4. The strategy can be utilized in teaching listening, speaking, reading and writing.
5. Certain regulations integrate the implementation of the strategy.
6. The strategy can develop learners' problem-solving skills, decision making, leadership and independence.
7. Awareness of the multiple perspectives of the issue is developed.
8. Students learn how to ask and answer deep questions.
9. Students' discussions become well-focused.
10. Self-assessment takes place systematically.
11. Students develop self-confidence.
12. Co-operative teamwork is encouraged.
13. Students' egoism decreases.
14. Time is saved.

The Six Thinking Hats strategy can provide neutral and objective exploration of an issue as it can help students perform well as thinkers under each assigned hat (Al-Khataybeh & Al-Tarawneh, 2015, p.28). Thus, developing thinking alongside with using other teaching techniques, can generate the required productive types of speech interaction (Stanisalvovna & Leopoldovna, 2015, p.130).

However, the Six Thinking Hats strategy has some shortcomings as follows:

1. It needs competent teachers.
2. It needs considerable preparation of students and of the topics that can be handled using the strategy.
3. It needs a friendly and co-operative classroom environment.
4. It needs specific topics build on problem-solving to enable students to express their opinions and suggested solutions.
5. It might be more effective with speaking and writing rather than listening and reading (Al-Khataybeh & Al-Tarawneh, 2015, pp. 28-29).

In spite of the importance of the Six Thinking Hats in developing creative thinking, critical thinking and the four main language skills, it is still rarely used in the Egyptian context, which still needs further research to investigate the effect of the strategy on developing the speaking skill and positive attitudes towards using this essential communicative language skill.

Context of the problem

Firstly, in the light of the researcher's experience in teaching Methods of Teaching for online EFL General Diploma students, and the course specifications of the academic year 2020/2021, she observed their need of a certain strategy to develop their speaking skill. Secondly, the results of the previous studies asserted the need of developing speaking as an essential communicative productive skill, especially for the prospective English Language teachers who needed more practice of how to manage and contribute with their students in classroom discussions; e.g.: Marzouq (2012), Bilihi (2014), Litak (2015), Mohammedian (2015), Al Tomy (2016), Köroglu & Cakir (2017) and Khazhiev & Rakhimov (2019).

Statement of the problem

The problem of the present study could be stated in the need of online EFL General Diploma students for a certain strategy to facilitate

the development of their English Language speaking skill which would help them in their academic study, and in their future professional career as prospective English Language teachers.

Consequently, the present study attempted to answer the following questions:

1. What are the English Language speaking sub-skills suitable for online EFL General Diploma students?
2. What is the effect of utilizing the Six Thinking Hats strategy on developing the English Language speaking skill among online EFL General Diploma students?
3. What is the effect of utilizing the proposed strategy on enhancing the students' attitudes towards the English Language speaking skill?

Aims of the study

The present study aimed at investigating the effect of utilizing the Six Thinking Hats strategy on developing the English Language speaking skill and attitudes towards the skill among online EFL General Diploma students.

Significance of the study

This study intended to:

1. Develop the English Language speaking skill among prospective EFL teachers.
2. Help other colleagues to benefit from the proposed strategy in developing their students' speaking skill.
3. Pave the way for other studies in the field of TEFL that can use the Six Thinking Hats strategy for developing students' Speaking, Listening, Reading and Writing skills.

Study variables

1. The independent variable

The Six Thinking Hats strategy.

2. The dependent variables

A- Performance of the experimental group on the post-administration of the English Language speaking test.

B- Performance of the experimental group on the post-administration of the attitudes scale.

Study hypotheses

1. There is a statistically significant difference at 0.05 level between the mean scores of the experimental group students' performance on the

pre-administration and post-administration of the English Language speaking skill test as a whole in favour of the post-administration of the test.

2. There is a statistically significant difference at 0.05 level between the mean scores of the experimental group students' performance on the pre-administration and post-administration of the English Language speaking skill test in each assigned speaking component in favour of the post-administration of the test.
3. There is a statistically significant difference at 0.05 level between the mean scores of the experimental group students' performance on the pre-administration and post-administration of the attitudes scale towards the English Language speaking skill in favour of the post-administration of the scale.

Delimitations of the study

1. The study was delimited to developing the assigned fifteen speaking sub-skills of online EFL General Diploma students, since using the proposed strategy is suitable for the students in the high level. These sub-skills are derived from the five identified speaking components; namely: Comprehension, Pronunciation, Vocabulary, Grammar, and Fluency.
2. The study was conducted at the Faculty of Graduate Studies for Education, Cairo University where the researcher worked.
3. The proposed strategy was implemented online for three months during the first semester of the academic year 2020-2021, one lecture per week, two hours each.

Definition of terms

1. *The Six Thinking Hats strategy*

Hani, Petrus & Sitinjak (2017,p.85) defined it as “a strategy which requires students to expand their way of thinking about a topic by wearing six different thinking hats”.

Jane (2018, p.64) defined it as “a process of deliberately adopting a particular approach to a problem as an implementation of Parallel Thinking as well as an aid to lateral thinking. Six different approaches are described, and each is symbolized by the act of putting on a coloured hat, either actually or imaginatively”.

The researcher defined it operationally as an innovative strategy introduced by Edward De Bono that would be used to develop online EFL General Diploma students' speaking skill and attitudes towards it.

2. *Speaking skill*

Hammad & Ghali (2015, p.52) defined it as “a productive aural/oral process that consists of using grammatical rules, cohesive devices, lexical items, phonological rules for expressing one’s thoughts and feelings in speech”.

Larasanti & Dianti (2019, p.44) defined it as “one of the macro skills which is necessary to be learnt and practiced. It involves communicative performance such as pronunciation, grammar, vocabulary, fluency and comprehension”.

In the present study, the researcher defined it as an essential communicative language skill that should be mastered by the prospective EFL teachers. It implements comprehension, pronunciation, vocabulary, grammar and fluency.

3. *Attitudes*

Ibnian (2009, p.17) defined them as responses and reactions that students have towards learning English as a foreign language.

The Longman Dictionary of Contemporary English (2015, p.71) defined them as opinions and feelings that a person usually has about something, especially when this is shown in behaviour.

Attitudes were defined in the current study as the opinions and responses of prospective English Language teachers towards speaking as an essential communicative skill.

II) Review of Literature

A number of studies tackled the effect of utilizing the Six Thinking Hats strategy on developing the main language skills. Some of them tackled how to develop the speaking skill. Others dealt with developing motivation and positive attitudes towards the skill.

Marzouq (2012) examined the effectiveness of verbal interaction strategies in improving English speaking proficiency for prospective teachers in the faculty of specific education. The results proved the effectiveness of the strategies in improving the students’ English speaking proficiency.

Bilihi (2014) aimed at identifying student-teachers’ oral performance problems at Faculties of Education, English Department in Yemen and proposing a remedial design for those problems. The results indicated that students faced a lot of oral performance problems. Thus, a remedial design for overcoming these problems was proposed.

Khataybeh and Al Tarawneh (2015) investigated the effect of using the Six Thinking Hats strategy on developing of EFL secondary school students' writing skill. The results of the study indicated that there were significant differences in favour of the experimental group. In addition, using the Six Thinking Hats strategy was more effective with the students in the high and intermediate levels than the low level.

Litak (2015) described lateral thinking, introduced and applied the Six Thinking Hats strategy to third year English Philology Department students. The outcomes of the experiment proved to be effective. The strategy developed students' concentration, organization of thoughts and generating ideas, taking into account that the strategy tackled different perspectives.

Mohammedian (2015) investigated the correlation between speaking anxiety, oral fluency and grammatical accuracy among EFL student-teachers in oral tasks. Results proved that students suffered from "communication apprehension" anxiety which affected their oral proficiency, and that improving communication skills was effective in enhancing them practice teaching.

Al Tomy (2016) investigated the effectiveness of an instructional program, based on the eclectic approach, on developing the oral communication skills of student-teachers, English Department, Faculty of Education. Results revealed that the electric approach adopted by the proposed program significantly improved the oral communication skills of the experimental group.

Hani, Petrus and Sitinjak (2017) explored tenth grade students' speaking achievement after being taught using the Six Thinking Hats strategy. The findings showed that the experimental group had obvious and better improvement in speaking than the control group.

Köroglu & Cakir (2017) investigated the effects of Flipped Instruction on pre-service English Language teachers' speaking sub-skills development. The results showed that there was a significant difference between the experimental group and the control group in terms of fluency, coherence, vocabulary, grammar, pronunciation and accuracy sub-skills.

Larasanti & Dianti (2019) explored the effect of using the Six Thinking Hats strategy on improving eleventh year students' speaking achievement. The results of the study indicated that the strategy could

significantly improve students' speaking achievement, and that the experimental group outperformed the control group on the speaking test.

Khazhiev & Rakhimov (2019) sought to investigate the possibilities of making out-of-the-box teaching a realistic aim. They identified challenges that teachers face in the classroom, and suggested practical solutions for them. Wearing De Bono's Six Thinking Hats was suggested as one of the teaching strategies that can modify the teacher's perspective of how to face classroom problems.

Noviati (2019) examined the effectiveness of using the Six Thinking Hats strategy in teaching reading narrative texts to eighth grade students. The strategy was applied on one experimental group, and results proved that teaching reading narrative texts using the strategy was effective.

Shorasul (2019) analyzed the notion of motivation and the role of using particular methods for increasing students' motivation and positive attitudes towards learning a foreign language. The Six Thinking Hats was classified as a creative method that can increase students' motivation as it helps them discuss problems by expressing different points of view. It can also improve communication and decision making. Structured and efficient thinking are mixed with suggestions, judgements, information and emotions due to the different style of each "Hat of Thinking".

In spite of the importance of the Six Thinking Hats strategy in EFL teaching and learning, either in developing the language skills or the critical and creative thinking skills, very few studies only tackled this critical issue in the Egyptian context. Moreover, according to the researcher's best knowledge, there was no study conducted in Egypt regarding using the Six Thinking Hats in teaching speaking to EFL prospective teachers. That is why, the researcher of the current study attempted to investigate the effect of utilizing the Six Thinking Hats strategy on developing the speaking skill and attitudes towards the skill among online EFL General Diploma students.

III) Method and Procedures

A. Design

The current study used both the analytical and the quasi-experimental method with one group pretest- posttest design. It is partially analytical as it presented a theoretical framework of the Six Thinking Hats strategy, the speaking skill and attitudes towards the skill, and partially experimental as it implemented a pre-post speaking test and

an attitudes scale conducted on a group of thirty-two online EFL General Diploma students.

B. Participants

Participants of the current study were thirty-two online EFL General Diploma students at the Faculty of Graduate Studies for Education, Cairo University. The strategy was implemented during the first semester of the academic year 2020/2021. It was implemented as part of their Methods of Teaching course for three months, two hours per week. Their ages ranged between 24 and 25 years old, and their English Language proficiency was at the advanced level.

C. Study instruments

1. The English Language speaking sub-skills checklist:

Aim of the checklist

The checklist aimed at validating the English Language speaking sub-skills suitable for online EFL General Diploma students in the light of utilizing the Six thinking Hats strategy.

Description of the checklist

The researcher designed the checklist in the light of the previous studies and her experience in teaching online EFL General Diploma students. It included -in its final form- fifteen speaking sub-skills derived from five speaking components; namely: Comprehension, Pronunciation, Vocabulary, Grammar and Fluency (see Appendix No.1).

Validity of the checklist

The checklist was submitted -in its initial form- to specialized jury members in the field of Curriculum and EFL instruction, and modified according to their recommendations and suggestions.

2. The English Language speaking test:

Aim of the test

The test aimed at measuring the English Language speaking skill of online EFL General Diploma students as a whole, and the English Language speaking sub-skills related to each component of the five assigned speaking components.

Description of the test

The test contained a speaking question asking for utilizing the Six Thinking Hats in solving a certain teaching problem that prospective EFL teachers could face during their future career. The researcher asked the students to choose one of two problems (either A or B). The students recorded a monologue in five minutes and submitted it immediately to

the researcher. The monologue was considered practical and less stressful than any other assessment instrument since it suited online students and the circumstances of Covid-19 Disease existence. Test duration was estimated by counting the times of twenty-five EFL General Diploma students, different from the sample of the current study, divided on the number of students. Thus, the time allotted for the test was 5 minutes (see Appendix No. 2).

Test validity

In order to ensure the content validity of the test, it was shown to specialized jury members in the field of Curriculum and EFL Instruction to assess it in terms of the consistency of the test questions to the aim of the test and the suitability of the test questions to the level of the students and the suitability of the instructions of the test to the students' level. Thus, the test and instructions were modified according to the jury members' suggestions.

Test reliability

In order to ensure the test reliability, the test-retest method was used before the implementation of the Six Thinking Hats strategy, with an interval of two weeks, on twenty-five EFL General Diploma students other than the sample of the current study. The reliability coefficient was 0.82, which was relatively high.

Test scoring

The test questions were scored according to the test rubric (see Appendix No. 3). The rubric was justified by specialized jury members in the field of Curriculum and EFL instruction. Thus, it was modified according to their suggestions. The rubric, based on the speaking sub-skills checklist contained five components; namely: Comprehension, Pronunciation, Vocabulary, Grammar and Fluency. Each assigned component implied three sub-skills. Each skill of the fifteen sub-skills measured in the speaking question was given three marks. Thus, the total mark of the pre-post speaking test was forty-five marks.

To ensure the reliability of the test rubric, the researcher needed another specialized colleague to listen to the students' recordings and assess their speaking performance. The speaking question was scored by the researcher and her colleague independently. The inter-raters' correlation coefficient was estimated using the Cronbach-Alpha Formula. It was 0.87, which was relatively high.

3. The English Language speaking attitudes scale:

Aim of the scale

The scale aimed at measuring the attitudes of online EFL General Diploma students towards the speaking skill.

Description of the scale

The scale was designed in the light of the previous studies. It contained -in its final form- twenty-six items, taking into account having thirteen positive items and thirteen negative items to ensure objectivity. The items of the scale were asking about actual speaking practices that students carried out. The scale duration was estimated by counting the times that twenty-five EFL General Diploma students, other than the sample of the current study, took to answer the scale divided on their number. Thus, the estimated time for answering the scale was thirty minutes.

Scale validity

To ensure the scale validity, it was submitted to specialized jury members in the fields of Curriculum and EFL Instruction, and Educational Psychology. They assessed the scale in terms of: the relevance of the scale items to its aim, the suitability to the students' level, and the clarity of the scale instructions and items. The scale items were modified according to their recommendations.

Scale reliability

To ensure the scale reliability, it was administered to a group of twenty-five EFL General Diploma students, other than the sample of the current study. The reliability coefficient was estimated using Cronbach Alpha Formula. The estimated value was 0.84 which was considered relatively high.

Scale scoring

The instrument was a three-point Likert-Scale. Participants were asked to state if they are uncertain, agree or disagree with each item ranging from Disagree = 1 to Uncertain = 2 to Agree = 3 for positive items; and from Disagree = 3 to Uncertain = 2 to Agree = 1 for negative items.

D. The procedures of the proposed strategy

In order to achieve the aims of using the strategy, the following procedures were carried out:

1. The researcher selected the suitable topics assigned to the online EFL General Diploma students in their EFL Methods of Teaching course. e.g.: What if your students

- A. are all at different levels?
 - B. are not co-operative?
 - C. do not want to participate?
 - D. can not understand the listening tapes?
 - E. finish the required tasks at different speed?
 - F. make classroom disruptions?
2. The researcher explained to the students the procedures of using the Six Thinking Hats strategy.
 3. The researcher exposed the White Hat (which represented Neutral Thinking) and ensured that accurate facts, numbers and knowledge were introduced by students about the topic. This discussion took three to four minutes.
 4. The researcher displayed the Red Hat (which represented Affective Thinking) and encouraged students to reveal emotions, feelings and intuition about the topic. The discussion about the Red Hat took about one minute.
 5. The researcher exposed the Black Hat (which represented Negative Thinking) and asked students to logically evaluate and criticize the assigned topic. The discussion took three to four minutes.
 6. The researcher presented the Yellow Hat (which represented Optimistic Thinking) and required from students to provide constructive and positive information about the topic. The discussion took three to four minutes.
 7. The researcher introduced the Green Hat (which represented Creative Thinking) and encouraged students to develop creativity, innovative ways and new ideas about the assigned topic. The discussion took three to four minutes.
 8. The researcher exposed the Blue Hat (which represented Inclusive Thinking). The group leader revealed a general, well-organized and purposeful perspective about the assigned topic. He / She summarized all what was said by the group members. The discussion also took three to four minutes.
- e.g.: What if your students are all of different levels?
1. The researcher explained and reminded the students of the procedures of using the Six Thinking Hats strategy. She also observed their performance in all the stages.
 2. The researcher exposed the White Hat. Thus, some students talked about facts, numbers and general information about the

differentiations they encountered among learners' language levels. The discussion took three to four minutes.

3. The researcher exposed the Red Hat. Thus, some students revealed sympathy towards learners who could not cope with their colleagues. This activity took one minute.
4. The researcher exposed the Black Hat. Thus, some students began to evaluate and criticize having learners with different language levels in the same class. Some of them expressed the impossibility of finding a solution, so they suggested ignoring the problem. This discussion took three to four minutes.
5. The researcher exposed the Yellow Hat. Thus, some students suggested a constructive and positive solution to the problem such as dividing the students into groups consisting of students of different levels cooperating together in answering the teacher's questions and accomplishing the required tasks. This discussion took three to four minutes.
6. The researcher exposed the Green Hat. Thus, some students introduced creative and innovative ways to solve the problem, such as: using different teaching aids effectively, varying the tasks required from the learners, and dividing the students themselves into groups in order to accomplish the required tasks. This discussion took three to four minutes.
7. Finally, the researcher exposed the Blue Hat. She selected one of the students as a group leader. He / She delivered a general, well-organized summary of the different sides of the problem and the best solutions reached by the whole group to solve it. This activity took three to four minutes.

Teaching methods

According to the Six Thinking Hats strategy, the researcher used: brainstorming, discussion and lecturing as teaching methods.

Instructional aids

The current study used all the instructional aids available on the Blackboard Site to teach the online EFL General Diploma students.

Assessment

The assessment system used in the current study was represented in the researcher's comments and feedback given during the class discussions as formative assessment, and a pre-post speaking test and a

pre-post attitudes scale as summative assessment. Thus, the researcher used both formative and summative assessment.

IV) Data Analysis and Results

The aims of the current study were to investigate the effect of utilizing the Six Thinking Hats strategy on developing the English Language speaking skill and attitudes towards it among online EFL General Diploma students. The sample, represented in one experimental group, was submitted to pre-post-administration of an English Language speaking test and an attitudes scale. The statistical analysis of the data and the results were interpreted in terms of the study hypotheses. To test the first hypothesis which stated: “There is a statistically significant different at 0.05 level between the mean scores of the experimental group students’ performance on the pre-administration and post-administration of the English Language speaking skill test as a whole in favour of the post-administration of the test”, a t-test was conducted to compare the overall performance of the students on the pre-administration versus the post-administration of the English Language speaking test. Paired sample t-test was used. Table (1) shows means, standard deviations and t-values of the experimental group on the pre-and-post administration of the English Language speaking test.

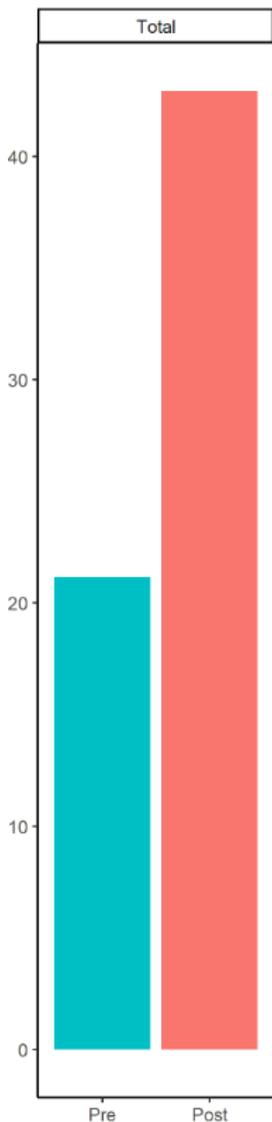
Table (1)

T-test Results Comparing Mean Scores of the Pre-and-Post Administration of the English Language Speaking Test, as a whole, for the Experimental Group (N = 32, DF = 31)

Administration	Mean	Std. Deviation	Std. Error Mean	t-value	Sig. Level	Effect Size (n ²)
Pre	21.16	3.655	0.646	33.985*	0.000	0.97
Post	42.94	1.917	0.339			

T-test proved that there was a statistically significant difference at 0.05 level between the mean scores of the experimental group students’ performance on the pre-administration and post-administration of the English Language speaking test as a whole in favour of the post-administration of the test. The calculated effect size indicated that the Six Thinking Hats strategy had a significant effect on the experimental group post-performance on the total score. The total effect size was (0.97) with a t-value (33.985). Thus, the first hypothesis was supported. For more elaboration of the pre-post English Language speaking test results of the experimental group, figure (1) was designed:

Figure (1): The Pre-Post English Language Speaking Test Results of the Experimental Group



To test the second hypothesis which stated: “There is a statistically significant difference at 0.05 level between the mean scores of the experimental group students’ performance on the pre-administration and post-administration of the English Language speaking test in each assigned speaking component in favour of the post-administration of the test”, a t-test was conducted to compare the students’ performance on the pre-administration versus post-

administration of the English Language speaking test. Paired sample t-test was utilized. Table (2) illustrates means, standard deviations and t-values of the experimental group on the pre-post administration of the English Language speaking test.

Table (2)

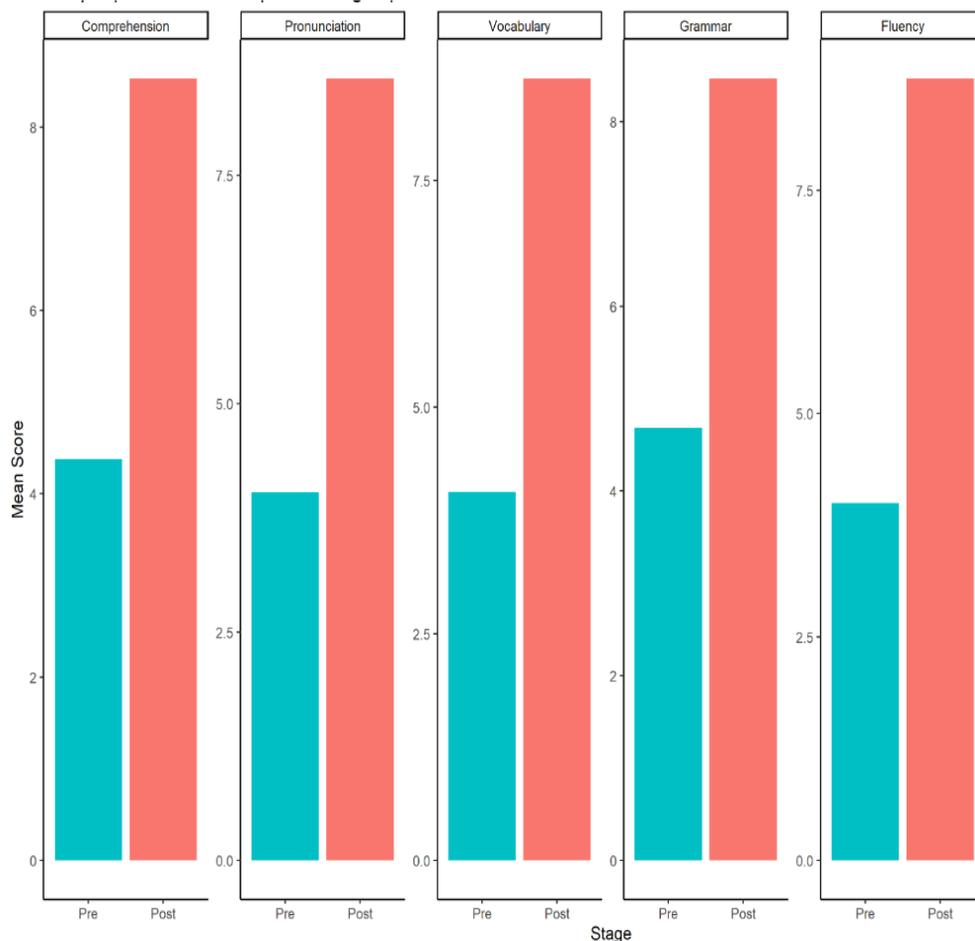
T-test Results Comparing the Mean Scores of the Pre-and-Post Administration of the English Language Speaking Test for the Experimental Group in Each Speaking Component Including its Assigned Sub-Skills (N = 32, DF = 31)

Components	Administration	Mean	Std. Deviation	Std. Error Mean	t-value	Sig. Level	Effect Size (n ²)
1. Comprehension	Pre	4.38	1.070	0.189	21.752	0.000	0.94
	Post	8.53	0.621	0.110			
2. Pronunciation	Pre	4.03	0.967	0.171	23.796	0.000	0.95
	Post	8.56	0.669	0.118			
3. Vocabulary	Pre	4.06	0.948	0.168	26.291	0.000	0.96
	Post	8.63	0.609	0.108			
4. Grammar	Pre	4.69	0.998	0.176	23.599	0.000	0.95
	Post	8.47	0.671	0.119			
5. Fluency	Pre	4.00	0.803	0.142	31.896	0.000	0.97
	Post	8.75	0.508	0.090			

T-test proved that there was a statistically significant difference at 0.05 level between the mean scores of the experimental group students' performance on the pre-administration and post-administration of the English Language speaking test in favour of the post-administration of the test. The calculated effect sizes indicated that the Six Thinking Hats strategy had a significant effect on the experimental group post-performance on each speaking component score.

The largest effect size was for Fluency (0.97), with a t-value (21.752). It was followed by Vocabulary (0.96), with a t-value (26.291). Then, Pronunciation (0.95), with a t-value (23.796), and Grammar (0.95), with a t-value (23.599). The lowest effect size was for Comprehension (0.94) with a t-value (21.752). Thus, the estimated effect size values indicated that the Six Thinking Hats strategy had a large effect on the experimental group students' mastery of each speaking component including its assigned sub-skills. Consequently, the second hypothesis was supported. For more clarification of the pre-post English Language speaking test results of the experimental group, figure (2) was presented:

Figure (2): The Pre-Post English Language Speaking Test Results of the Experimental Group in Each Speaking Component



To test the third hypothesis which stated: “There is a statistically significant difference at 0.05 level between the mean scores of the experimental group students’ performance on the pre-administration and post-administration of the attitudes scale towards the English Language speaking skill in favour of the post-administration of the scale”, a t-test was conducted to compare the experimental group students’ performance on the pre-administration versus the post-administration of the attitudes scale. Paired sample t-test was used. Table (3) shows means, standard deviations and t-values of the experimental group on the pre-and-post administration of the attitudes scale.

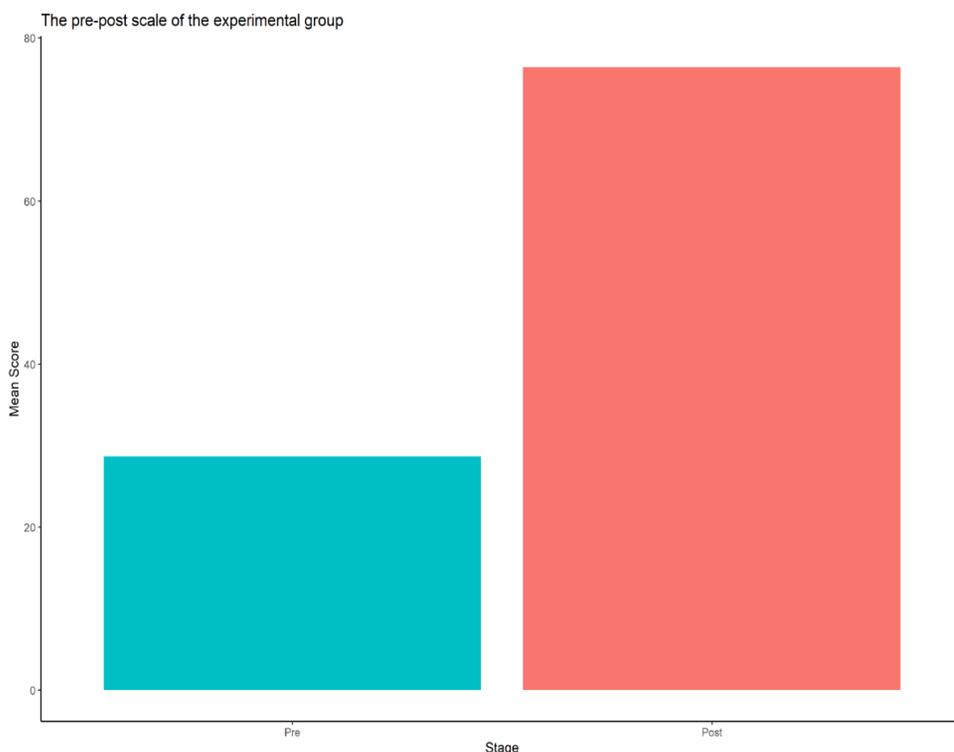
Table (3)

T-test Results Comparing the Mean Scores of the Pre-and-Post Administration of the Attitudes Scale Towards the English Language Speaking Skill (N = 32, DF = 31)

Administration	Mean	Std. Deviation	Std. Error Mean	t-value	Sig. Level	Effect Size (n ²)
Pre	28.69	1.306	0.231	165.501*	0.000	0.99
Post	76.41	1.132	0.200			

T-test proved that there was a statistically significant difference at 0.05 level between the mean scores of the experimental group students' performance on the pre-administration and post-administration of the attitudes scale towards the English Language speaking skill in favour of the post-administration of the scale. The total effect size was (0.99), with a t-value (165.501). Thus, the third hypothesis was supported. For more illustration of the pre-post attitudes scale results of the experimental group, figure (3) was introduced:

Figure (3): The Pre-Post Attitudes Scale Results of the Experimental Group



V) Discussion of Results

By reaching the previously mentioned results, the current study has answered all the study questions. It identified the English Language speaking components including their assigned sub-skills suitable for online EFL General Diploma students, the effect of the Six Thinking Hats strategy on developing the English Language speaking skill, and its effect on the students' attitudes toward the skill.

Results of the study proved that the experimental group's post-performance significantly exceeded its own pre-performance on the overall English Language speaking skill test, as well as on each speaking component. They also proved that the experimental group's positive attitudes towards the English Language speaking skill significantly developed on the post-administration of the scale than its pre-administration.

The results are consistent with the results of other researchers; namely: Hani, Petrus & Sijinjak (2017), Larasanti & Dianti (2019), Khadzhiev & Rakhimov (2019) and Shorasul (2019). The Six Thinking Hats strategy proved to achieve significant development on the learners' speaking skill, and that the strategy made out-of-the-box teaching a reality. The strategy succeeded in facing the challenges that teachers and lecturers face in the classroom. In other words, the strategy succeeded to find out practical solutions to various problems by modifying the teacher's and lecturer's perspective of how to face those classroom problems and reach effective and positive results in developing language skills, such as speaking and writing.

Moreover, the strategy proved to achieve significant development on the positive attitudes towards learning one of the main language skills. As for prospective EFL teachers, the strategy proved to enhance their communication skills by speaking spontaneously and freely, and consequently it would also most probably help them practice teaching effectively. Moreover, the Six Thinking Hats actually proved to be a creative strategy that creates a non-threatening environment, since it helped learners discuss problems by expressing different points of view, communicate and make decision. Practicing the language skills, side by side with using structured and efficient thinking are mixed with information, emotions, suggestions and judgments due to the different perspective of each hat of thinking.

The success of the Six Thinking Hats strategy in achieving quantitative and qualitative results was due to the procedures of the strategy that helped students in looking at an issue from different angles, organizing ideas and drawing conclusions. Reluctance to speak was defeated to a great extent, even for shy students. They became more confident in terms of understanding the topics introduced. They also seemed to enjoy the process of the Six Thinking Hats strategy. Thus, the strategy could effectively improve the students' speaking skill and their way of thinking. It also helped them to be open-minded, make their own decisions and solve the problems they could face in their daily life situations.

Concerning the English Language speaking skill, the experimental group students achieved significant progress on their post-performance in the English Language speaking skill as a whole, and in all the five components incorporating the fifteen sub-skills (see Appendix 1); namely: Fluency, Vocabulary, Pronunciation, Grammar and Comprehension respectively than on their pre-performance. The effect sizes of the five components were large and very close to each other (0.97, 0.96, 0.95, 0.95, 0.94) and correspond with the large total effect size (0.97). This could be attributed to the positive effect of utilizing the Six Thinking Hats strategy in teaching, and to the successful control of the study variables involved.

Concerning the attitudes towards the speaking skill, the experimental group students showed significant development. This positive effect in the students' attitudes could also be attributed to utilizing the Six Thinking Hats strategy in teaching. The effect size of the scale items was (0.99), which was considered large. In conclusion, students' interaction, co-operation with each other and with the researcher, during the lectures, helped them develop both their speaking skill and their positive attitudes towards the skill.

Recommendations

In the light of the results of the current study, the following recommendations are suggested:

1. Teachers should not limit their speaking skill instruction to only using one strategy, and they have to apply other innovative strategies.
2. The Six Thinking Hats strategy should be used in teaching EFL.
3. The strategy should be conducted on the students of medicine, engineering and business administration as well.

4. The strategy should be an essential part in designing teachers' training programmes.

Suggestions for further research

In the light of the results of the current study, the following suggestions are presented for further research:

1. Similar studies should be conducted on the effect of utilizing the Six Thinking Hats strategy on developing Listening, Reading and Writing skills.
2. Other studies can be applied on other learners at the primary, preparatory and secondary stages to measure the effect of using the strategy in teaching on their speaking performance.
3. Other studies might consider the effect of utilizing the strategy on students' motivation towards the speaking skill and reducing their anxiety towards the skill.
4. Another study might consider the effect of using the strategy on the students' attitudes towards their future profession as English Language teachers.

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